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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/838,486 | 04/19/2001 | Maurice W. Peterson | 00CR020/KE | 8926 |

7590 05/25/2005
ROCKWELL COLLINS, INC.
Attention: Kyle Eppelle
M/S 124-323
400 Collins Rd. NE
Cedar Rapids, IA 52498

EXAMINER

LUGO, DAVID B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2637

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 09/838,486 | Applicant(s) PETERSON, MAURICE W. | |
| | Examiner David B. Lugo | Art Unit 2637 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12, 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1 and 11 is/are rejected.
- 7) ☒ Claim(s) 2-10 and 16-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 6-10 and 16-20 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s) or rewrite the claim(s) in independent form.

3. Claims 6-8 and 16-18 recite that the phase error estimate is estimated via a maximum abscissa technique, while respective base claims 1 and 12 recite that a minimum to maximum envelope ratio technique is used. Claims 6-8 and 16-18 teach an alternate technique to that used in claims 1 and 12, and thus are not further limiting.

4. Claims 9-10 and 19-20 recite that the phase error estimate is estimated via a half angle technique, while respective base claims 1 and 12 recite that a minimum to maximum envelope ratio technique is used. Claims 9-10 and 19-20 teach an alternate technique to that used in claims 1 and 12, and thus are not further limiting.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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7. Claim 11 recites a system for estimating phase errors comprising means for estimating a phase error and means for compensating for said phase error. These limitations are written in means plus function form, invoking 35 U.S.C. 112, 6th paragraph. According to MPEP § 2185, section II, if one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If applicant fails to do so, "the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the 112, second paragraph." It is noted that the recited means are not described in the written description, nor is the system shown in the drawings. Since the recited means plus function limitations are not described or supported by corresponding structure, material or acts in the specification disclosure, the claims do not particularly point out the subject matter which applicant regards as his invention. See MPEP § 2185.

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee U.S. Patent 6,356,599.

10. Regarding claims 1 and 11, Lee discloses a device and method for estimating phase error in Figure 5 where a waveform is received by an analog front end, an estimate of a phase error is made by phase error estimator 515, and is used to compensate for the phase error (col. 7, lines 11-16), where the phase error is estimated via a ratio of amplitude values as shown in equation 4, and is broadly considered a minimum to maximum envelope ratio technique.

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Allowable Subject Matter

11. Claims 12, 14 and 15 are allowed.
12. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 9, 10, 19 and 20 are objected to as indicated above, but would be allowable if rewritten in independent form and if the reference to the minimum to maximum envelope ratio technique being used is removed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Lugo
5/20/05


KHAI TRAN
PRIMARY EXAMINER